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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,569	05/19/2005	Kazuhiro Oshika	MAT-8672US	7722
23122	7590	03/22/2007	EXAMINER	
RATNERPRESTIA			PENDLETON, DIONNE	
P O BOX 980			ART UNIT	
VALLEY FORGE, PA 19482-0980			PAPER NUMBER	
			2615	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/22/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/535,569

Applicant(s)

OSHIKA ET AL.

Examiner

Dionne H. Pendleton

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 August 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>5/2005;12/2005</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. Figures 5A-5C should be designated by a legend such as **--Prior Art--** because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to under 37 CFR 1.83(a) because they fail to show :

"each terminal" recited in claim 1, line 5;

the *"conductive pattern part"* on the printed circuit board, recited in claim, line 6;

"signal inputting parts" recited in claim 1, line 7;

the *"terminal"*, recited in claim 2, line 1;

the *"connector"*, recited in claim 2, line 2; and

the *"another printed circuit board"*, recited in claim 2, line 2

as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing.

MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are

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required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 1,2,5 and 7** are rejected under 35 U.S.C. 102(e) as being anticipated by **Mullenborn (US 2004/0120540)**.

Regarding claim 1,

In **figure 1C**, Mullenborn teaches a loudspeaker apparatus comprising: an elongate printed circuit board **82**; in paragraph [0035], a plurality of actuators (speakers) **80a,80b,80c,80d** mounted on the PCB and aligned substantially straightly in much the same direction as the elongate PCB, the PCB being for incorporation into a larger housing for cooperation with other electronic elements, thereby inherently including *terminals* for inputting a signal of the loudspeakers **80a,80b,80c,80d**, and wherein each terminal is electrically coupled with a conductive pattern part (shown) of the PCB;

And wherein signal inputting parts for inputting a signal from the outside are formed by leading the conductive pattern part (shown) to at least both ends of the PCB in the longitudinal direction, as claimed.

Regarding claim 2,

Mullenborn teaches a signal inputting part comprising a conductive pattern (shown) on the PCB, as well as inherently teaching a terminal. Since the PCB in **figure 1C** is for integration into a larger electronic device, Mullenborn is interpreted as inherently teaching that the PCB **82** is coupled with another PCB or printed board of *the main device*.

Regarding claims 5 and 7,

In paragraph [0040] Mullenborn teaches a high frequency roll-off filter (which is realized with a capacitor) coupled to the conductive pattern part, as broadly claimed, thus reading on "a high cut filter, which restrains an input at high frequencies...".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 3,4,6 and 8** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Mullenborn (US 2004/0120540)**.

Regarding claims 3 and 6,

Mullenborn teaches the invention of claims 1 and 2. Mullenborn also teaches that the loudspeakers **80a, 80b, 80c, 80d** are electrically coupled with one another. Mullenborn does not clearly teach that the impedance is equalized or approximated to an impedance of one loudspeaker. However, the Examiner takes Official Notice that it is well known in the art and would have been obvious for one of ordinary skill in the art at the time of the invention to include a means for equalizing impedance of the drive signals applied to the speaker devices, for the purpose of more accurately reproducing the sound radiation pattern of the sensed acoustic signal.

Regarding claims 4 and 8,

Mullenborn does not clearly teach that the loudspeakers may be connected in series. However, the Examiner takes Official Notice that it is well known in the art and would have been obvious for one of ordinary skill in the art at the time of the invention

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to connect the speakers **80a**, **80b**, **80c**, **80d** in series, so that the reproduced audio signals are in phase with one another.

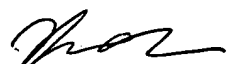
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dionne H. Pendleton whose telephone number is 571-272-7497. The examiner can normally be reached on 9-5:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Dionne Pendleton


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